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Reviewer: Anne Corrigan

Timestamp: [year=2008; month=9; day=30; hr=12; min=0; sec=3; ms=514;]

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Application No: 09980839 Version No: 1.0

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<110> APPLICANT: FLAMAND, MARIE
      MEGRET, FRANCOIS
      ALCON, SOPHIE
      TALARMIN, ANTOINE
      DESPRES, PHILIPPE
      DEUBEL, VINCENT
<120> TITLE OF INVENTION: EARLY DETECTION OF FLAVIVIRUSES USING THE NS1
      GLYCOPROTEIN
<130> FILE REFERENCE: 03495-0213

<140> CURRENT APPLICATION NUMBER:09980839
<141> CURRENT FILING DATE:2002-06-21
<150> PRIOR APPLICATION NUMBER: PCT/FR00/01620
<151> PRIOR FILING DATE: 2000-06-09
<150> PRIOR APPLICATION NUMBER: FR 99/07290
<151> PRIOR FILING DATE: 1999-06-09
<150> PRIOR APPLICATION NUMBER: FR 99/07361
<151> PRIOR FILING DATE: 1999-06-10
<160> NUMBER OF SEQ ID NOS: 2
<170> SOFTWARE: PatentIn Ver. 2.1

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<211> LENGTH: 1137
<212> TYPE: DNA
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<220> FEATURE:
<221> NAME/KEY: CDS
<222> LOCATION: (1)..(1134)
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      aca ctg tac cta gga gtc atg gtt caa gcg gac tcg gga tgt gta atc      96
      Thr Leu Tyr Leu Gly Val Met Val Gln Ala Asp Ser Gly Cys Val Ile
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      aac tgg aag ggc aga gaa ctc aaa tgt gga agt ggc att ttt gtc act      144
      Asn Trp Lys Gly Arg Glu Leu Lys Cys Gly Ser Gly Ile Phe Val Thr
           35             40             45
      aat gaa gtc cac act tgg aca gag caa tac aaa ttc cag gct gac tcc      192
      Asn Glu Val His Thr Trp Thr Glu Gln Tyr Lys Phe Gln Ala Asp Ser
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      cca aaa aga ctg tca gca gcc att ggg aag gca tgg gag gag ggc gtg      240
      Pro Lys Arg Leu Ser Ala Ala Ile Gly Lys Ala Trp Glu Glu Gly Val
           65             70             75             80
      tgt gga att cga tca gcc acg cgt ctt gag aac atc atg tgg aag caa      288
      Cys Gly Ile Arg Ser Ala Thr Arg Leu Glu Asn Ile Met Trp Lys Gln
           85             90             95
      ata tca aat gaa ttg aac cac att cta ctt gaa aat gac atg aaa ttc      336
      Ile Ser Asn Glu Leu Asn His Ile Leu Leu Glu Asn Asp Met Lys Phe
           100            105            110
      aca gtg gtt gta gga gat gct aat gga att ttg gcc cag ggg aaa aaa      384
      Thr Val Val Val Gly Asp Ala Asn Gly Ile Leu Ala Gln Gly Lys Lys
           115            120            125
      atg atc agg cca caa ccc atg gaa cac aaa tac tca tgg aaa agc tgg      432
      Met Ile Arg Pro Gln Pro Met Glu His Lys Tyr Ser Trp Lys Ser Trp
           130            135            140
      gga aaa gcc aag atc ata gga gca gac aca cag aat acc acc ttc atc      480

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| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| Gly | Lys | Ala | Lys | Ile | Ile | Gly | Ala | Asp | Thr | Gln | Asn | Thr | Thr | Phe | Ile | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| atc | gac | ggc | cca | gac | act | cca | gaa | tgc | ccc | gat | gac | caa | aga | gcg | tgg | 528 | |
| Ile | Asp | Gly | Pro | Asp | Thr | Pro | Glu | Cys | Pro | Asp | Asp | Gln | Arg | Ala | Trp | | |
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| aac | att | tgg | gaa | gtt | gag | gac | tat | ggg | ttt | gga | att | ttc | acg | aca | aac | 576 | |
| Asn | Ile | Trp | Glu | Val | Glu | Asp | Tyr | Gly | Phe | Gly | Ile | Phe | Thr | Thr | Asn | | |
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| Ile | Trp | Leu | Lys | Leu | Arg | Asp | Ser | Tyr | Thr | Gln | Met | Cys | Asp | His | Arg | | |
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| Leu | Met | Ser | Ala | Ala | Val | Lys | Asp | Ser | Lys | Ala | Val | His | Ala | Asp | Met | | |
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| Gly | Tyr | Trp | Ile | Glu | Ser | Glu | Lys | Asn | Glu | Thr | Trp | Lys | Leu | Ala | Arg | | |
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| gcc | tcc | ttc | ata | gaa | gtc | aag | aca | tgc | att | tgg | ccg | aaa | tcc | cac | act | 768 | |
| Ala | Ser | Phe | Ile | Glu | Val | Lys | Thr | Cys | Ile | Trp | Pro | Lys | Ser | His | Thr | | |
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| cta | tgg | agt | aat | gga | gtt | ttg | gaa | agt | gaa | atg | ata | atc | cca | aag | ata | 816 | |
| Leu | Trp | Ser | Asn | Gly | Val | Leu | Glu | Ser | Glu | Met | Ile | Ile | Pro | Lys | Ile | | |
| | | | | 260 | | | | 265 | | | | | 270 | | | | |
| tat | gga | gga | cca | ata | tct | cag | cac | aat | tac | aga | cca | ggg | tat | ttc | aca | 864 | |
| Tyr | Gly | Gly | Pro | Ile | Ser | Gln | His | Asn | Tyr | Arg | Pro | Gly | Tyr | Phe | Thr | | |
| | | | | 275 | | | | 280 | | | | | 285 | | | | |
| caa | aca | gca | ggg | cca | tgg | cac | cta | ggg | aag | ttg | gaa | ttg | gat | ttt | gac | 912 | |
| Gln | Thr | Ala | Gly | Pro | Trp | His | Leu | Gly | Lys | Leu | Glu | Leu | Asp | Phe | Asp | | |
| | | | | 290 | | | | 295 | | | | | 300 | | | | |
| ttg | tgt | gaa | ggc | acc | aca | gtt | gtt | gtg | gat | gaa | cat | tgt | gga | aat | cga | 960 | |
| Leu | Cys | Glu | Gly | Thr | Thr | Val | Val | Val | Asp | Glu | His | Cys | Gly | Asn | Arg | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | |
| ggg | cca | tct | ctc | aga | act | aca | aca | gtc | aca | gga | aag | ata | atc | cat | gaa | 1008 | |
| Gly | Pro | Ser | Leu | Arg | Thr | Thr | Thr | Val | Thr | Gly | Lys | Ile | Ile | His | Glu | | |
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| tgg | tgt | tgc | aga | tcc | tgc | acg | tta | ccc | ccc | tta | cgc | ttc | aga | gga | gaa | 1056 | |
| Trp | Cys | Cys | Arg | Ser | Cys | Thr | Leu | Pro | Pro | Leu | Arg | Phe | Arg | Gly | Glu | | |
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| gac | gga | tgt | tgg | tat | ggc | atg | gaa | atc | aga | cca | gtt | aag | gag | aag | gag | 1104 | |
| Asp | Gly | Cys | Trp | Tyr | Gly | Met | Glu | Ile | Arg | Pro | Val | Lys | Glu | Lys | Glu | | |
| | | | | 355 | | | | 360 | | | | | 365 | | | | |
| gag | aac | cta | gtt | agg | tca | atg | gtc | tct | gca | taa | | | | | | 1137 | |
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<211> LENGTH: 378

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<400> SEQUENCE: 2

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| Thr | Leu | Tyr | Leu | Gly | Val | Met | Val | Gln | Ala | Asp | Ser | Gly | Cys | Val | Ile | | |
| | | | | 20 | | | | 25 | | | | | 30 | | | | |
| Asn | Trp | Lys | Gly | Arg | Glu | Leu | Lys | Cys | Gly | Ser | Gly | Ile | Phe | Val | Thr | | |
| | | | | 35 | | | | 40 | | | | | 45 | | | | |
| Asn | Glu | Val | His | Thr | Trp | Thr | Glu | Gln | Tyr | Lys | Phe | Gln | Ala | Asp | Ser | | |

| | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
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| Pro 65 | Lys | Arg | Leu | Ser | Ala | Ala | Ile | Gly | Lys | Ala | Trp | Glu | Glu | Gly | Val | |
| | | | | | 70 | | | | | 75 | | | | | 80 | |
| Cys | Gly | Ile | Arg | Ser | Ala | Thr | Arg | Leu | Glu | Asn | Ile | Met | Trp | Lys | Gln | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ile | Ser | Asn | Glu | Leu | Asn | His | Ile | Leu | Leu | Glu | Asn | Asp | Met | Lys | Phe | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Thr | Val | Val | Val | Gly | Asp | Ala | Asn | Gly | Ile | Leu | Ala | Gln | Gly | Lys | Lys | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Met | Ile | Arg | Pro | Gln | Pro | Met | Glu | His | Lys | Tyr | Ser | Trp | Lys | Ser | Trp | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Gly | Lys | Ala | Lys | Ile | Ile | Gly | Ala | Asp | Thr | Gln | Asn | Thr | Thr | Phe | Ile | |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | | |
| Ile | Asp | Gly | Pro | Asp | Thr | Pro | Glu | Cys | Pro | Asp | Asp | Gln | Arg | Ala | Trp | |
| | | | 165 | | | | | 170 | | | | | 175 | | | |
| Asn | Ile | Trp | Glu | Val | Glu | Asp | Tyr | Gly | Phe | Gly | Ile | Phe | Thr | Thr | Asn | |
| | | 180 | | | | | 185 | | | | | 190 | | | | |
| Ile | Trp | Leu | Lys | Leu | Arg | Asp | Ser | Tyr | Thr | Gln | Met | Cys | Asp | His | Arg | |
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| Leu | Met | Ser | Ala | Ala | Val | Lys | Asp | Ser | Lys | Ala | Val | His | Ala | Asp | Met | |
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| Gly | Tyr | Trp | Ile | Glu | Ser | Glu | Lys | Asn | Glu | Thr | Trp | Lys | Leu | Ala | Arg | |
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| Leu | Trp | Ser | Asn | Gly | Val | Leu | Glu | Ser | Glu | Met | Ile | Ile | Pro | Lys | Ile | |
| | | 260 | | | | | 265 | | | | | 270 | | | | |
| Tyr | Gly | Gly | Pro | Ile | Ser | Gln | His | Asn | Tyr | Arg | Pro | Gly | Tyr | Phe | Thr | |
| | 275 | | | | | 280 | | | | | 285 | | | | | |
| Gln | Thr | Ala | Gly | Pro | Trp | His | Leu | Gly | Lys | Leu | Glu | Leu | Asp | Phe | Asp | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Leu | Cys | Glu | Gly | Thr | Thr | Val | Val | Val | Asp | Glu | His | Cys | Gly | Asn | Arg | |
| 305 | | | | 310 | | | | | 315 | | | | | 320 | | |
| Gly | Pro | Ser | Leu | Arg | Thr | Thr | Thr | Val | Thr | Gly | Lys | Ile | Ile | His | Glu | |
| | | | 325 | | | | | 330 | | | | | 335 | | | |
| Trp | Cys | Cys | Arg | Ser | Cys | Thr | Leu | Pro | Pro | Leu | Arg | Phe | Arg | Gly | Glu | |
| | | 340 | | | | | 345 | | | | | 350 | | | | |
| Asp | Gly | Cys | Trp | Tyr | Gly | Met | Glu | Ile | Arg | Pro | Val | Lys | Glu | Lys | Glu | |
| | 355 | | | | | 360 | | | | | 365 | | | | | |
| Glu | Asn | Leu | Val | Arg | Ser | Met | Val | Ser | Ala | | | | | | | |
| | 370 | | | | | 375 | | | | | | | | | | |